



May 17, 2001

**Confidential**

## The Growing Importance of Digital Credentials

- » Organizations are fundamentally changing the way they conduct business. The Internet allows a company to operate more efficiently and reach out to more customers, partners, and employees in a faster and more cost-effective fashion.
- » The explosive growth in the use of this medium has also spawned the need for increased security measures for digital transactions.
- » Digital credentials, like userid/passwords, digital certificates, security tokens, smart cards, are proliferating in order for organizations to achieve this security and enable the Internet economy.
- » In order to conduct secure digital transactions, the first-time registration for security credentials used in these transactions is **crucial** in providing a trust model in the digital world.

## Authentify - A Practical Business Solution

### » The Problem:

Organizations need to develop a scalable and auditable mechanism for assuring the identity of a participant in an Internet transaction (Intranet, Internet and Extranet)

### » The Solution:

Authentify – provides real-time verification of an Internet user's identity by synchronizing an automated telephone call with an Internet session

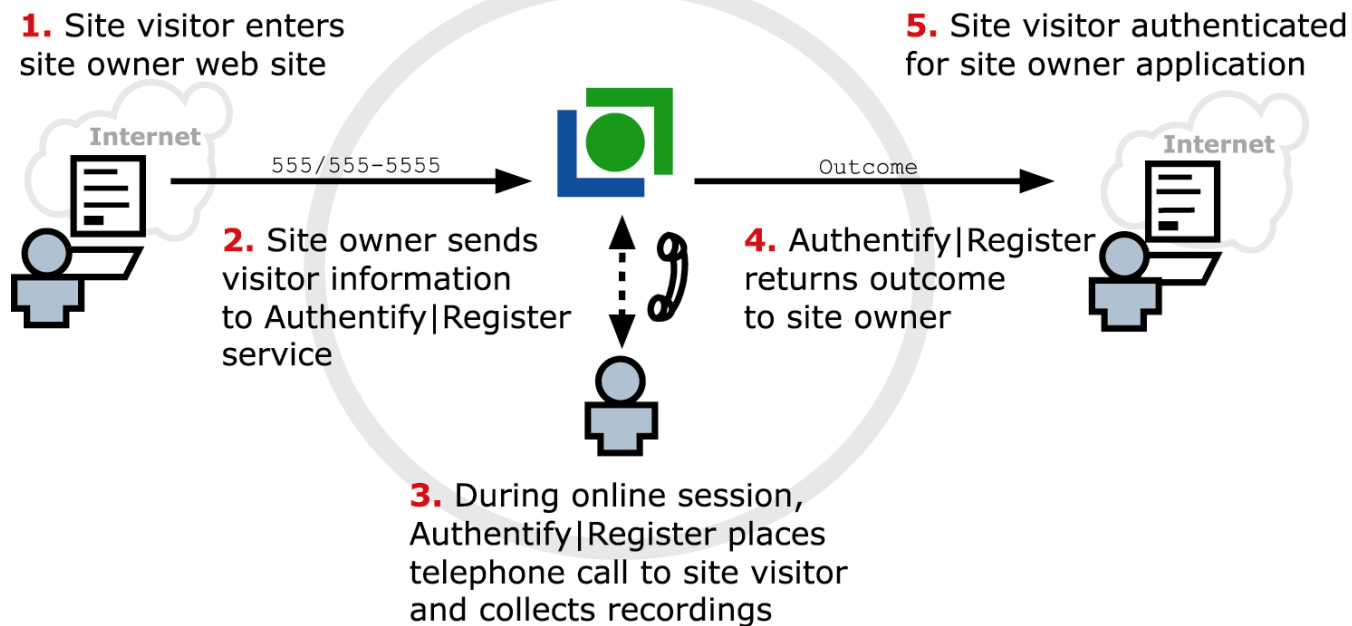
## What We Do ...

- » By synchronizing an Internet session with an automated telephone call, Authentify:
  - offers an **automated, self-service** registration
  - provides a **real-time** verification mechanism
  - captures a jury-worthy **audit trail** for each transaction
  - employs an **easy-to-use** and globally available means for authentication – the telephone network
  - **integrates seamlessly** into existing infrastructures
  - can be **easily customized** and implemented in days, not weeks
  - can **easily scale** – from 1 to 100,000 calls instantly
  - **reduces authentication costs** while providing additional security

## Authentication Methods

Authentication Method	Description	Assessment
<b>Shared Secret</b>	Relies on the entry of a shared secret as verification of a user's identity – either via e-mail or voice	Fast, but insecure: <ul style="list-style-type: none"><li>• Few unattainable shared secrets</li><li>• Fraud rates rising rapidly</li><li>• Low consumer confidence</li><li>• Audit mechanism: none</li></ul>
<b>Physical Presence</b>	Requires every user to be physically present to identify himself	More secure but not scalable: <ul style="list-style-type: none"><li>• Long time delays</li><li>• Expensive and not scalable</li><li>• Impractical in many locations</li><li>• Audit mechanism: picture ID</li></ul>
<b>Mail</b>	Utilizes a personal identification number (PIN) transmitted through the mail	Conceptually secure, but slow and ineffective: <ul style="list-style-type: none"><li>• Takes days to execute</li><li>• High “drop-out” rate</li><li>• Audit mechanism: registered/certified mail</li></ul>
<b>Telephone (Authentify)</b>	Implements a multi-part registration process using the Public Switched Telephone Network (PSTN) as a trusted out-of-band network	<b>Fast, Secure, and Reliable:</b> <ul style="list-style-type: none"><li>• <b>Real-time</b></li><li>• <b>Trusted and protected</b></li><li>• <b>Familiar, proven, and easy-to-use</b></li><li>• <b>Audit mechanism: recording</b></li></ul>

## How Does Authentify|Register Work?



*Fully Customizable Process*

## Sample Application – Online Banking Registration

Registration - Microsoft Internet Explorer

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Address http://demo.authentify.com/registration-form-htm.asp Go

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NASDAQ	3,929.5	▲ +23.56
S&P 500	1,509.83	▲ +5.62

**DJIA NASDAQ**



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### Registration

*\* Denotes required fields*

\*First Name  \*Last Name

Mailing Address

City  State

Zip Code  Country

Internet


https://test.authentify.com/phone.asp - Microsoft Internet Explorer

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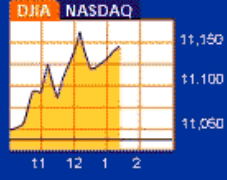
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### Confirming Phone Number

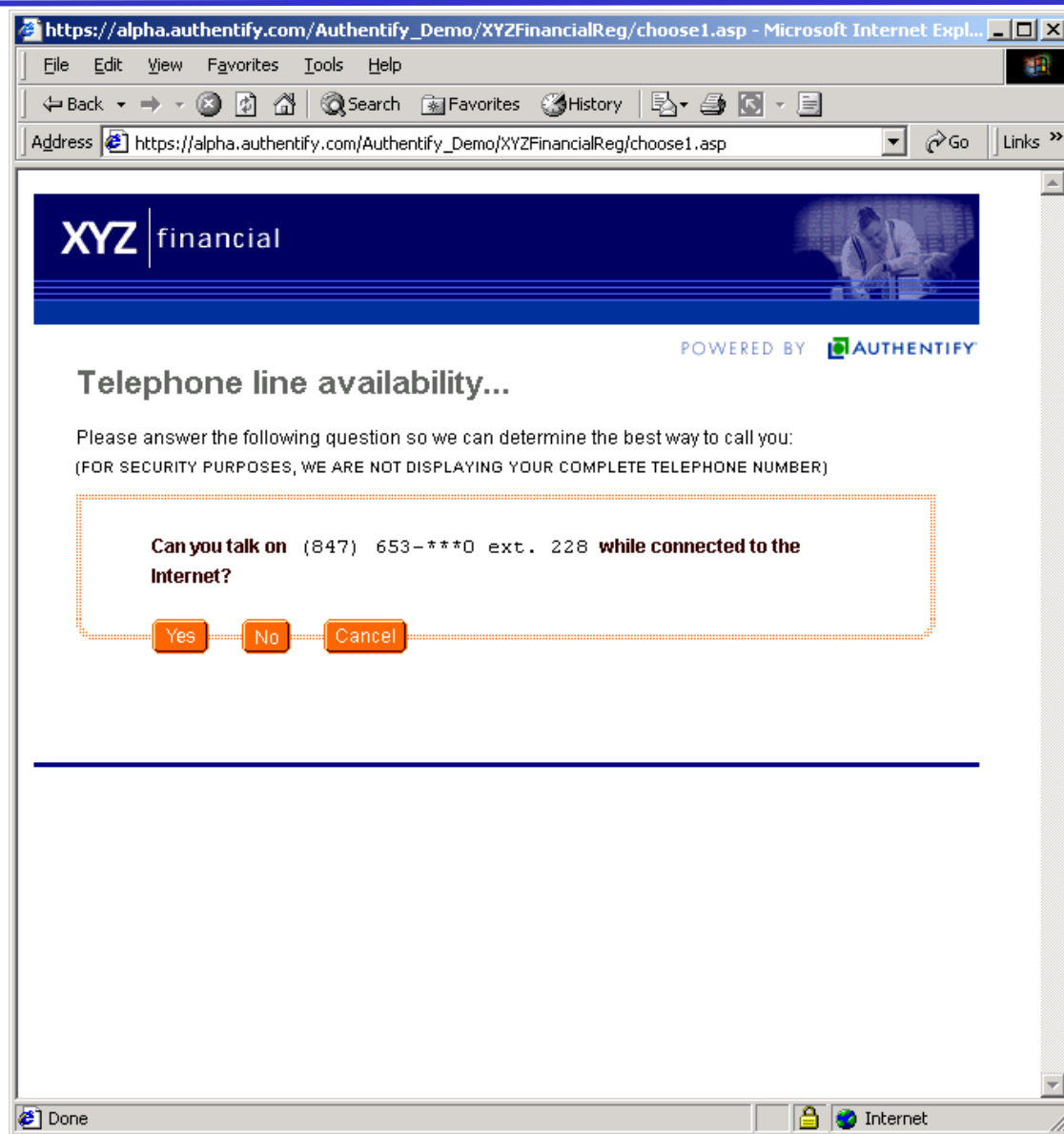
To insure the security of our customers, XYZ Financial will now place an automated telephone call to you to collect a voice recording. Please input or select the number where we can call you, even if your only available number is being used to access the Internet.

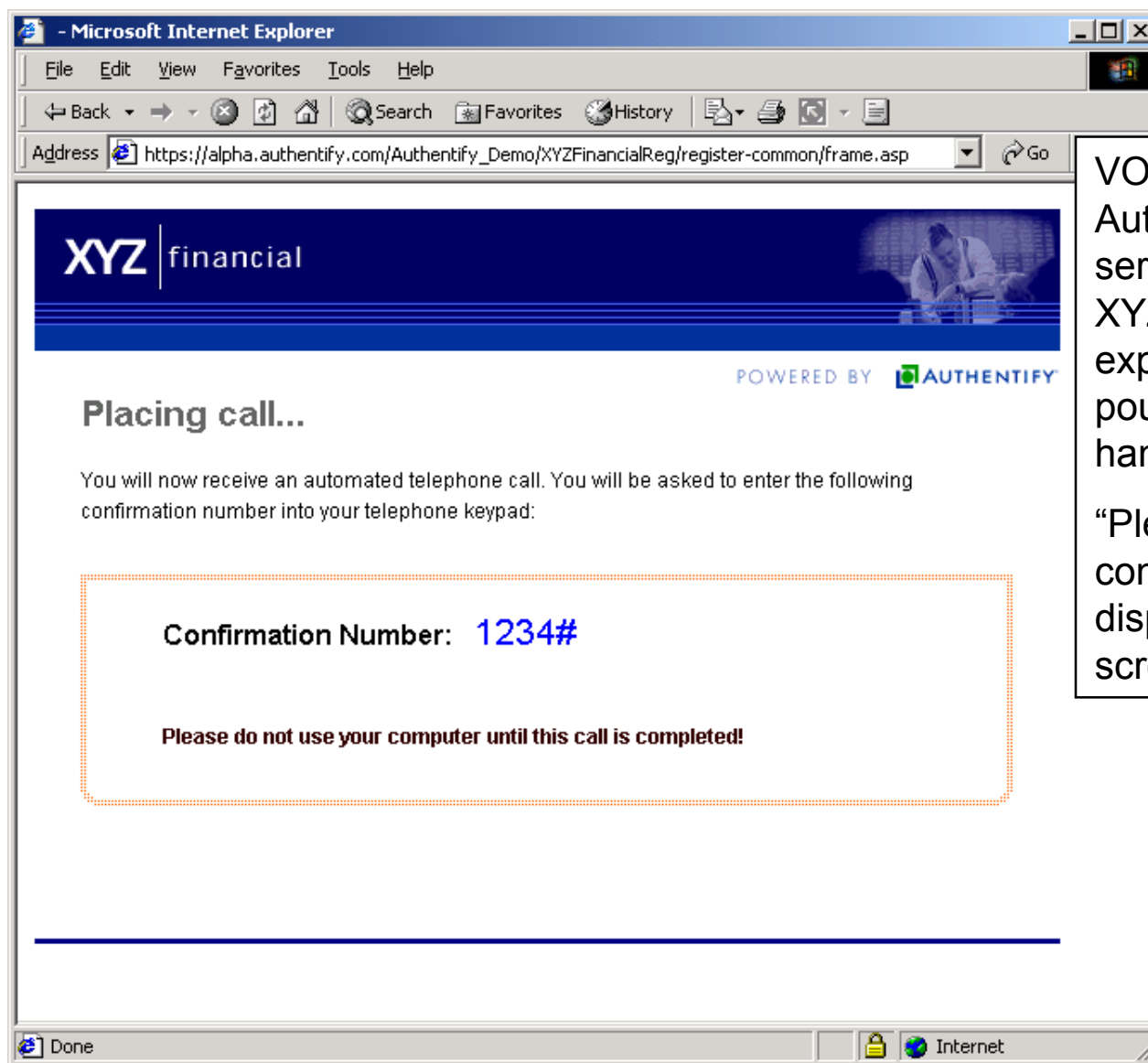
**FOR SECURITY PURPOSES, WE ARE NOT DISPLAYING YOUR COMPLETE TELEPHONE NUMBER**

<input type="radio"/> Work Phone:	(847) 653-***0 ext. 228	
<input type="radio"/> Mobile Phone:	(847) 274-***1	
<input type="radio"/> Other Phone:	Country: UNITED STATES 1 Phone number: Extension: (In U.S., enter as xxx-xxx-xxxx)	

CONTINUE CANCEL

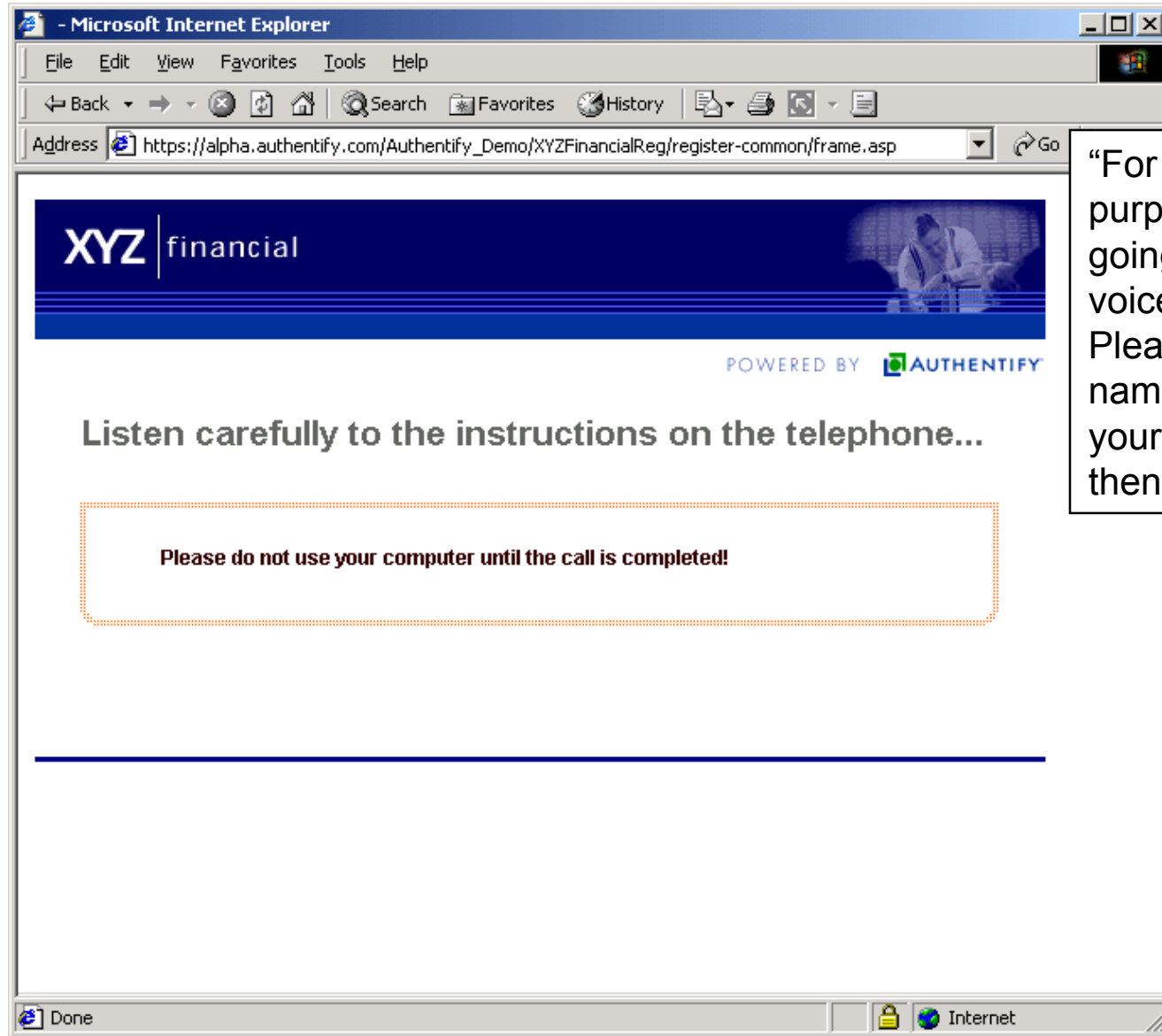




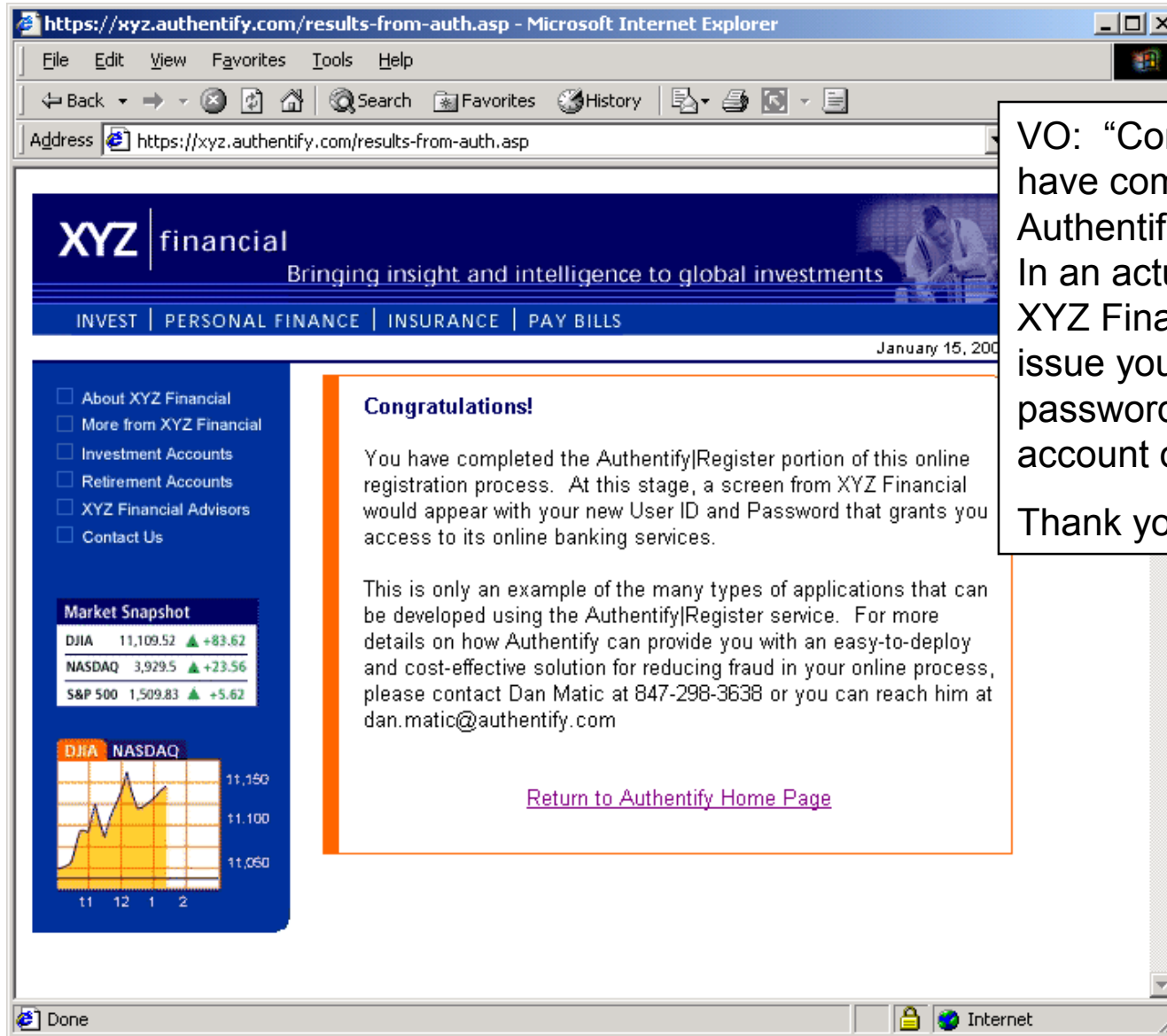


VO: "Hello – this is the Authentify registration service calling on behalf of XYZ Financial. If you are expecting this call, press pound. Otherwise, please hang up."

"Please enter the confirmation number displayed on your computer screen now."



“For security purposes, we are now going to collect a voice recording. Please state your full name, followed by your mailing address, then press pound.”



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**DJIA NASDAQ**

11,150  
11,100  
11,050

11 12 1 2

**Congratulations!**

You have completed the Authentify|Register portion of this online registration process. At this stage, a screen from XYZ Financial would appear with your new User ID and Password that grants you access to its online banking services.

This is only an example of the many types of applications that can be developed using the Authentify|Register service. For more details on how Authentify can provide you with an easy-to-deploy and cost-effective solution for reducing fraud in your online process, please contact Dan Matic at 847-298-3638 or you can reach him at dan.matic@authentify.com

[Return to Authentify Home Page](#)

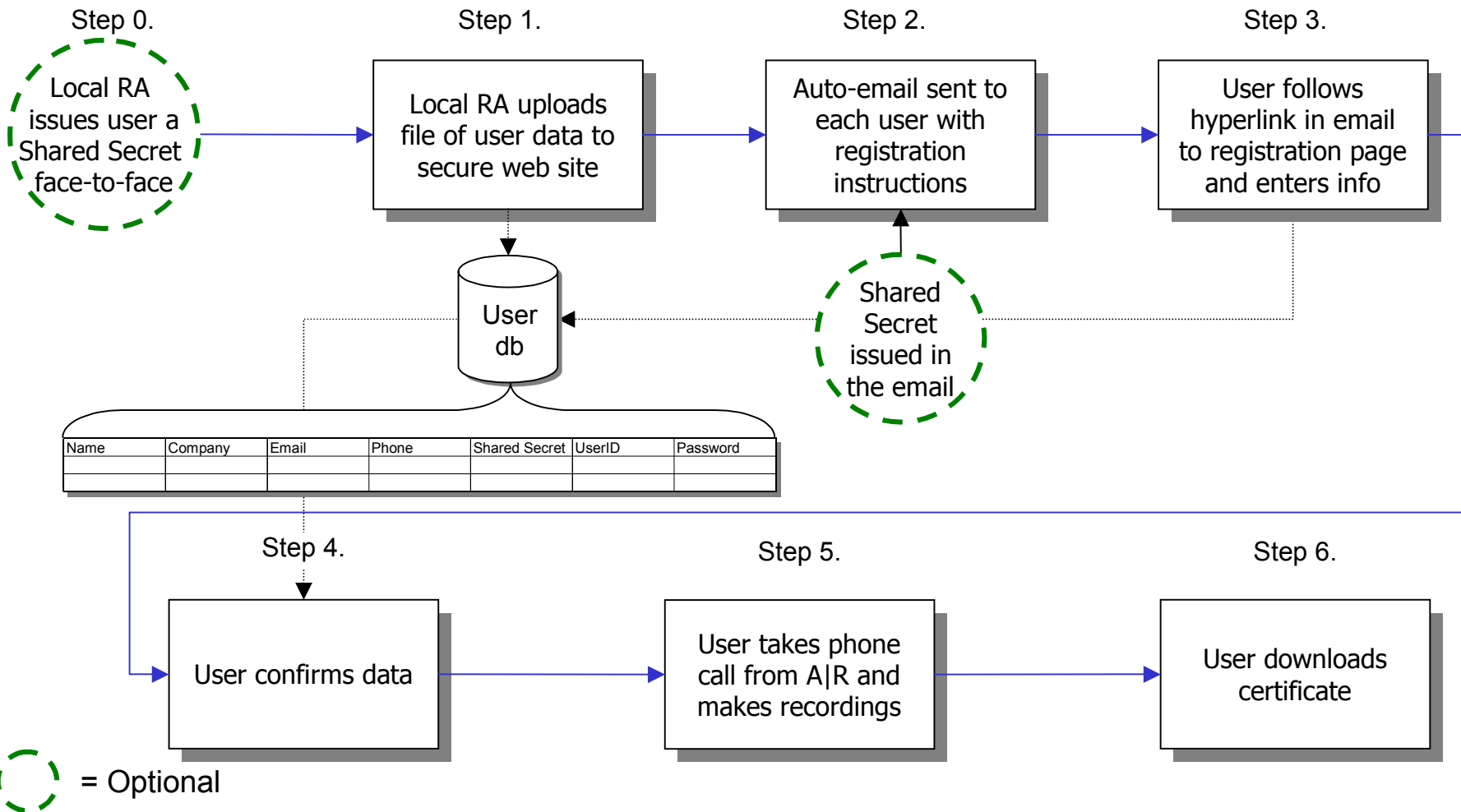
VO: "Congratulations, you have completed the Authentify|Register demo. In an actual application, XYZ Financial would now issue you a user ID and password to access your account online.

Thank you and goodbye."

## A PKI Registration Process Using Authentify|Register

- » **Step 0. Distribution of Shared Secret (optional)**
- » **Step 1. Administrator loads user data** – A local RA uploads the pertinent user data (e.g., distinguished name, email address, phone number) through a secure web site into the central database.
- » **Step 2. Email notification to users** – Users are automatically sent registration instructions and Shared Secret (optional) with link to first registration page in an email.
- » **Step 3. User enters Shared Secret** – User follows the link in the email to a registration web site (e.g. AutoRA) and enters their Shared Secret (optional) into the initial registration form.
- » **Step 4. User confirms their data** – Database checks for Shared Secret and returns the user's phone number (other information optional). User clicks on "Call Me Now" if they can take the phone call.
- » **Step 5. User completes Authentify|Register process** – The user's browser is redirected from the registration page to Authentify. The user performs the Authentify|Register process.
- » **Step 6. User creates certificate** – Upon successful completion of the Authentify|Register process, the user's browser is redirected back to the web server and the profile is created.

## Authentify|Register forms the foundation for a secure, self-service, and auditable PKI registration process



## Authentify – A Secure and Cost Effective Registration Solution

- **Automated, Self-Service Model**
- **More Secure**
- **Strong Audit Trail**
- **Real-time**
- **Instantly Scalable**
- **Highly Customizable**



- **Speeds Deployment**
- **Raises Relying Party Confidence**
- **Reduces Fraud**
- **Reduces Costs/Administrative Overhead**
- **Provides Strong Legal Protections**

## Company Overview

- » Founded: September 1999
- » Investors:
  - Jim Woodhill – A co-founder of Mission Critical Software
  - John Moores – Founder of BMC Software
- » Service deployed into production December 2000
- » Seasoned management team with significant experience in security, telephony, and Internet technologies
- » Customers: Baltimore Technologies, Entrust, Passlogix, UNext